



Williamson County, TN Draft School Fees July 13, 2016

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Williamson County School Fee Logistics

- Demand Factor: Student Generation Rates
 - Two Options
 - Option 1: Unit Type (Single Family vs. Multifamily)
 - Option 2: By Bedroom Number/By Unit Size
- Fee categories: K-8 (Elem. + Middle) and 9-12 (High)
 - Development in FSSD boundary only charged 9-12 component
 - FSSD will receive no impact fee revenue
- Need for potential revenue credit for Privilege Taxes is still under evaluation
 - Would reduce draft fees



Eligible Costs

- Facilities/improvements required to serve new development - **Yes**
- Maintenance and repairs – **No**
- Operating costs - **No**
- Excess capacity in existing facilities – **Yes**

Student Generation Rates





Generation Rate: by Type of Unit

Grades	Public School Students		
	Single Family	Multifamily	Total
K-8	241	11	252
9-12	97	3	100
	Grand Total		352

Housing Units		
Single Family	Multifamily	Total
668	51	719

Source: Cross tabulation by TischlerBise using U. S. Census Bureau 2013 ACS One-Year Public Use Microdata Sample.

Grades	Public School Students		
	Single Family	Multifamily	Total
K-8	22,842	1,884	24,726
9-12	9,194	514	9,708
	TOTAL		34,434

Housing Units		
Single Family	Multifamily	Total
63,313	8,736	72,049

Source: TischlerBise using U. S. Census Bureau 2013 ACS One-Year PUMS data for public school students and table B25024 for housing units.

Total Williamson County Enrollment (Fall 2013)	
26,545	
11,166	
37,711	

Step 2: Unadjusted Student Generation Rates

Public School Students per Housing Unit

Grades	Type		Weighted Average
	Single Family	Multifamily	
K-8	0.36	0.22	0.35
9-12	0.15	0.06	0.14
TOTAL	0.51	0.27	0.49

Source: TischlerBise using U. S. Census Bureau 2013 ACS One-Year Public Use Microdata Sample.

Student Generation Rates

Williamson County, TN

Public School Students per Housing Unit

Grades	Type		Weighted Average
	Single Family	Multifamily	
K-8	0.387	0.232	0.368
9-12	0.167	0.068	0.155
TOTAL	0.554	0.299	0.523

Source: TischlerBise using U. S. Census Bureau 2013 ACS One-Year Public Use Microdata Sample. (calibrated to 2013 enrollment and housing units)

<= Step 4: Adjusted SGR

2013 enrollment data is used to tailor 2013 U.S. Census bureau for region to Williamson County Schools



Generation Rate: Bedroom Size ACS Data

Public School Students by Bedroom Range					
Williamson County 2013 PUMS Survey Results					
Bedroom Range	Grades K-8 Students (1)	Housing Units (1)	Housing Mix	Unadjusted Students/HU	Adjusted Students/HU (2)
two or less	9	97	13.5%	0.09	0.097
three	62	259	36.0%	0.24	0.251
four or more	181	363	50.5%	0.50	0.524
Total	252	719		0.35	0.368
Bedroom Range	Grades 9-12 Students (1)	Housing Units (1)	Housing Mix	Unadjusted Students/HU	Adjusted Students/HU (2)
two or less	6	97	13.5%	0.06	0.069
three	22	259	36.0%	0.08	0.095
four or more	72	363	50.5%	0.20	0.221
Total	100	719		0.14	0.155

(1) American Community Survey, Public Use Microdata Sample for TN PUMA 2600 (2013 One-Year unweighted data).

(2) Adjusted multipliers are scaled to make the average PUMS values match control totals based on 2013 Williamson County total Fall enrollment and housing unit estimates from ACS table B25024.

DIV

6

METRO	
BedroomRange	Average of SQFS
four or more	3,438
three	1,967
two	1,264
Grand Total	2,537

Source: Survey of Construction Microdata, U.S. Census Bureau, 2013.
Square feet of single detached and attached units constructed in 2013. Count of authorization date is the sample size.

Metro value 1 means within MSA
Metro value 2 means outside MSA

Division codes

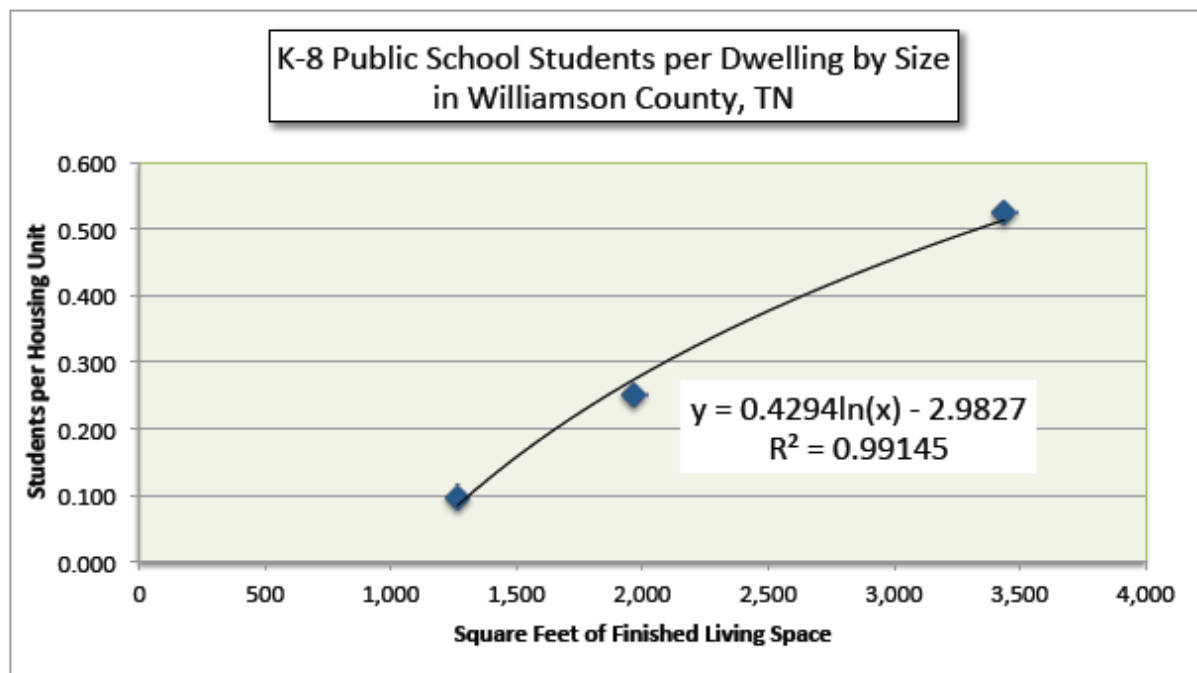
- 1 = New England
- 2 = Middle Atlantic
- 3 = East North Central
- 4 = West North Central
- 5 = South Atlantic
- 6 = East South Central
- 7 = West South Central
- 8 = Mountain
- 9 = Pacific



Generation Rate: K-8 by Bedroom Size

Average dwelling size by bedroom range is from 2013 Survey of Construction Microdata, U.S. Census Bureau. Average students per housing unit by bedroom range are derived from 2013 1-Year ACS PUMS data for TN PUMA 2600 (Williamson County).

Actual Averages per Hsg Unit			Fitted-Curve Values	
Bedrooms	Square Feet	K-8 Students	Sq Ft Example	K-8 Students
two or less	1,264	0.097	1,400	0.128
three	1,967	0.251	1,800	0.236
four or more	3,438	0.524	2,200	0.322
			2,600	0.394
			3,000	0.455
			3,400	0.509

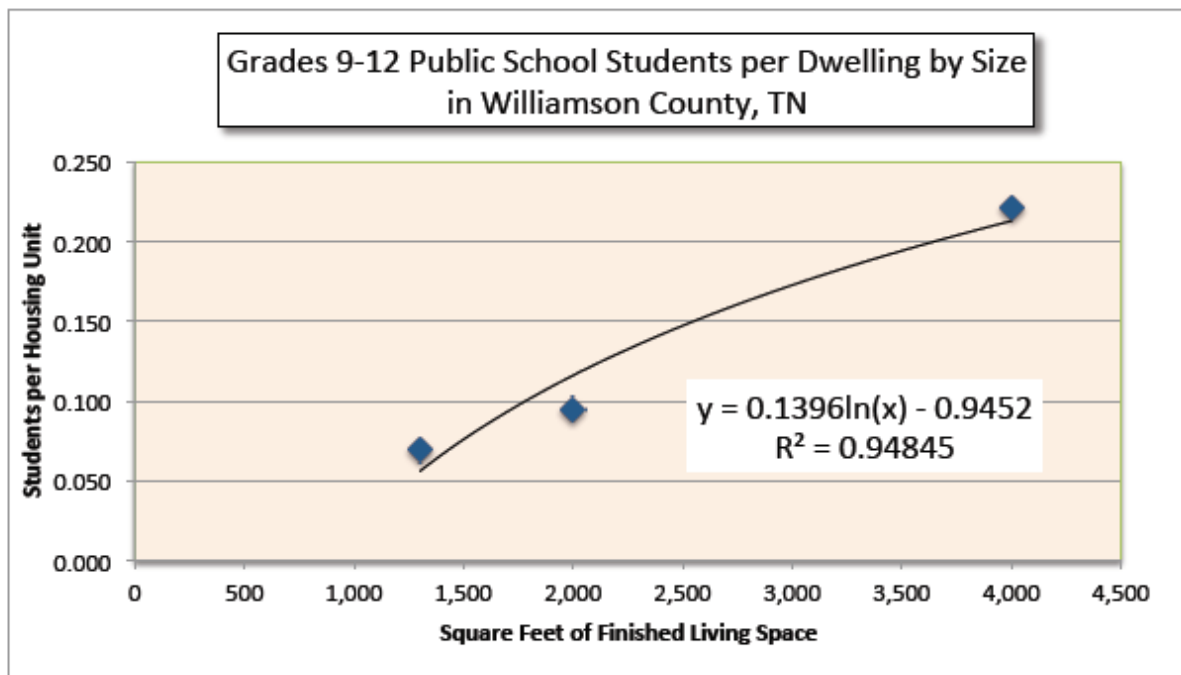




Generation Rate: 9-12 by Bedroom Size

Average dwelling size by bedroom range is from _____. Average students per housing unit by bedroom range are derived from 2013 1-Year ACS PUMS data for TN PUMA 2600 (Williamson County).

Actual Averages per Hsg Unit			Fitted-Curve Values	
Bedrooms	Square Feet	9-12 Students	Sq Ft Example	9-12 Students
two or less	1,300	0.069	1,400	0.066
three	2,000	0.095	1,900	0.109
four or more	4,000	0.221	2,400	0.141
			2,900	0.168
			3,400	0.190
			3,900	0.209





Enrollment Projections

Enrollment Projections [1]

	Current [2]	2016-17	2017-18	2018-19	2019-20	2020-21	Total Change	Annual Growth Rate
Elementary and Middle	24,340	25,410	26,859	28,412	30,096	31,910		6.2%
Net Change		1,070	1,449	1,553	1,684	1,814	7,570	
High	12,031	12,701	13,328	14,001	14,724	15,499		5.8%
Net Change		670	627	673	723	775	3,468	
Total	36,371	39,181	41,636	43,966	46,504	49,223		7.1%
Net Change		2,810	2,455	2,330	2,538	2,719	12,852	

[1] Williamson County Schools projections

[2] Actual enrollment from April 6, 2016

LOS and Cost Projections





K-8 Schools LOS

ELEMENTARY AND MIDDLE SCHOOLS (Grades K-8) Inventory, Enrollment, and Utilization					
Facility	Site Acreage	Building Square Footage	Permanent Capacity	Enrollment (4/6/2016) [1]	Utilization
Allendale ES	25.00	118,000	890	932	105%
Bethesda ES	22.00	84,102	780	610	78%
Brentwood MS	25.00	119,395	1,105	1,226	111%
Chapman's Retreat ES	20.00	86,600	805	730	91%
Clovercroft ES	22.72	118,000	890	783	88%
College Grove ES	20.00	48,150	460	394	86%
Crockett ES [2]	15.16	93,182	870	687	79%
Edmondson ES	20.00	85,221	825	809	98%
Fairview ES	11.50	58,581	715	447	63%
Fairview MS	10.00	99,112	764	538	70%
Grassland ES	25.00	90,000	870	527	61%
Grassland MS	32.00	139,820	1,160	911	79%
Heritage ES	30.00	82,000	805	675	84%
Heritage MS	41.00	118,000	1,185	1,053	89%
Hillsboro EMS	37.00	113,152	597	567	95%
Hunters Bend ES	20.00	68,625	780	524	67%
Kenrose ES	20.00	92,048	910	934	103%
Lipscomb ES	26.00	78,435	780	764	98%
Longview ES	21.00	121,000	890	803	90%
Mill Creek EMS [3]	45.52	234,000	1,600	0	0%
Nolensville ES	16.90	118,000	890	984	111%
Oak View ES	20.00	73,800	695	713	103%
Page MS	25.00	118,500	1,052	1,128	107%
Pearre Creek ES	14.00	118,000	890	706	79%
Scales ES	25.00	65,095	715	824	115%
Spring Station MS	35.00	137,200	971	1,051	108%
Sunset ES [4]	33.00	97,144	805	803	100%
Sunset MS [4]	40.36	118,806	869	920	106%
Trinity ES	21.00	86,661	870	684	79%
Walnut Grove ES	19.00	97,474	780	663	85%
Westwood ES	22.00	86,805	805	569	71%
Winstead ES	22.90	84,310	890	482	54%
Woodland MS [2]	17.44	107,200	975	899	92%
Total	800.50	3,356,418	28,888	24,340	84%

Elementary and Middle School Levels of Service

	Demand Units (Permanent Capacity)	Site Acreage	Building Square Footage
LOS per Student based on Capacity	28,888	0.028	116.19

[1] Does not include PK/EC

[2] Shared campus. Acreage is derived as a percentage of shared campus building square footage devoted to each school level.

[3] Slated to open in Fall 2016. Located on same land as Nolensville High; acreage derived as a percentage of square footage.

[4] Shared campus. Acreage is derived as a percentage of shared campus building square footage devoted to each school level.



9-12 Schools LOS

HIGH SCHOOLS (Grades 9-12) Inventory, Enrollment, and Utilization					
<i>Facility</i>	<i>Site Acreage</i>	<i>Building Square Footage</i>	<i>Permanent Capacity</i>	<i>Enrollment (4/6/2016) [1]</i>	<i>Utilization</i>
Brentwood HS	32.00	215,892	1,628	1,755	108%
Centennial HS	55.00	244,500	1,758	1,657	94%
Fairview HS	34.00	166,300	1,042	690	66%
Franklin HS	39.40	255,535	1,584	1,766	111%
Independence HS	83.55	253,482	1,671	1,546	93%
Nolensville HS [2]	50.48	259,495	1,800	0	0%
Page HS	40.00	187,550	1,215	1,043	86%
Ravenwood HS	80.00	253,482	1,649	2,104	128%
Renaissance HS	1.72	17,000	150	151	101%
Summit HS	71.73	259,000	1,671	1,319	79%
Total	487.87	2,112,236	14,168	12,031	85%

High School Levels of Service

	<i>Demand Units (Permanent Capacity)</i>	<i>Site Acreage</i>	<i>Building Square Footage</i>
LOS per Student based on Capacity	14,168	0.034	149.08

[1] Does not include EC

[2] Slated to open in Fall 2016. Located on same land as Mill Creek EMS; acreage derived as a percentage of square footage.



Land Costs

Facility	Year	Acreage	Cost	Cost per Acre
Allendale Elementary	2010	25	\$1,133,711	\$45,348
Spring Station Middle	2010	35	\$1,750,685	\$50,020
Clovercroft Elementary	2011	22.7	\$1,230,209	\$54,194
Summit High	2011	71.7	\$4,400,694	\$61,376
Nolensville High and Mill Creek Elementary and Middle [1]	2016	96	\$4,010,577	\$41,777
<i>Total</i>		250.4	\$12,525,876	\$50,023.47

[1] Slated to open in Fall 2016



Construction Costs

Facility	Year	Square Footage	Cost	Cost per Square Foot	Cost Adjustment Factor [2]	Adjusted Cost	Adjusted Cost per Square Foot
Allendale Elementary	2010	118,000	\$13,943,404	\$118.16	1.21	\$16,927,537	\$143.45
Spring Station Middle	2010	137,200	\$21,336,066	\$155.51	1.21	\$25,902,358	\$188.79
Clovercroft Elementary	2011	118,000	\$15,261,675	\$129.34	1.19	\$18,231,311	\$154.50
[1]	2016	234,000	\$34,140,875	\$145.90	1.00	\$34,140,875	\$145.90
<i>Total</i>		<i>607,200</i>	<i>\$84,682,020</i>	<i>\$139.46</i>		<i>\$95,202,081</i>	<i>\$156.79</i>
Summit High	2011	259,000	\$33,422,520	\$129.04	1.19	\$39,925,917	\$154.15
Nolensville High [1]	2016	259,495	\$46,640,476	\$179.74	1.00	\$46,640,476	\$179.74
<i>Total</i>		<i>518,495</i>	<i>\$80,062,996</i>	<i>\$154.41</i>		<i>\$86,566,393</i>	<i>\$166.96</i>

[1] Slated to open in Fall 2016

[2] Adjusted using the Turner Building Cost Index, 1st Quarter 2015



Operations/Support LOS and Costs

Facility	Square Footage
Operations Support Bldg.	28,012
Textbook Bldg.	8,871
Transportation	13,674
Equipment Shed.	6,116
<i>Total</i>	<i>56,673</i>
Cost per sq. ft.*	\$165
Total Replacement Cost	\$9,351,045
Enrollment (4/6/2016)	36,371
Square Feet per Student	1.56
Cost per Student	\$257.10

**Provided by County Staff*



Bus LOS and Costs

Type	Units	Unit Cost	Total
Regular	223	\$78,500	\$17,505,500
Special Education	40	\$89,800	\$3,592,000
<i>Total</i>	<i>263</i>		<i>\$21,097,500</i>
<i>Average</i>		\$80,219	
Enrollment (4/6/2016)			36,371
Buses per Student			0.007
Cost Per Student			\$580.06



Credit for Existing K-8 Debt

Year	Principal	Projected Enrollment [1]	Payment per Student
2017	\$14,910,000	39,181	\$380.54
2018	\$16,215,000	41,636	\$389.45
2019	\$15,685,000	43,966	\$356.75
2020	\$14,495,000	46,504	\$311.69
2021	\$14,985,000	49,223	\$304.43
2022	\$15,815,000	51,793	\$305.35
2023	\$15,445,000	54,364	\$284.10
2024	\$15,880,000	56,934	\$278.92
2025	\$15,815,000	59,505	\$265.78
2026	\$14,105,000	62,075	\$227.23
2027	\$12,825,000	64,645	\$198.39
2028	\$11,280,000	67,216	\$167.82
2029	\$10,000,000	69,786	\$143.29
2030	\$8,590,000	72,357	\$118.72
2031	\$7,075,000	74,927	\$94.43
2032	\$7,305,000	77,497	\$94.26
2033	\$7,600,000	80,068	\$94.92
2034	\$7,855,000	82,638	\$95.05
2035	\$1,925,000	85,209	\$22.59
2036	\$975,000	87,779	\$11.11
Total	\$228,780,000		\$4,144.82
Discount Rate [2]			2.32%
Net Present Value			\$3,525.44

[1] Projected enrollment beyond SY 2020-21 projected using historic annual growth rates from SY 2015-16 and SY 2020-21

[2] Interest rate at which the District has recently issued debt (Series 2016B)



Credit for Existing High School Debt

Year	Principal	Projected Enrollment [1]	Payment per Student
2017	\$11,870,000	39,181	\$302.95
2018	\$13,060,000	41,636	\$313.67
2019	\$13,490,000	43,966	\$306.83
2020	\$13,795,000	46,504	\$296.64
2021	\$11,650,000	49,223	\$236.68
2022	\$9,325,000	51,793	\$180.04
2023	\$9,660,000	54,364	\$177.69
2024	\$9,796,000	56,934	\$172.06
2025	\$9,355,000	59,505	\$157.21
2026	\$8,360,000	62,075	\$134.68
2027	\$8,190,000	64,645	\$126.69
2028	\$8,230,000	67,216	\$122.44
2029	\$7,835,000	69,786	\$112.27
2030	\$7,620,000	72,357	\$105.31
2031	\$5,695,000	74,927	\$76.01
2032	\$5,880,000	77,497	\$75.87
2033	\$6,095,000	80,068	\$76.12
2034	\$6,305,000	82,638	\$76.30
2035	\$1,300,000	85,209	\$15.26
Total	\$167,511,000		\$3,064.73
		Discount Rate [2]	2.32%
		Net Present Value	\$2,620.06

[1] Projected enrollment beyond SY 2020-21 projected using historic annual growth rates from SY 2015-16 and SY 2020-21

[2] Interest rate at which the District has recently issued debt (Series 2016B)



Fee Level of Service Inputs

<i>Current Level of Service Standards</i>		
	<i>K-8</i>	<i>9-12</i>
Square Feet per Student	116.19	149.08
Cost per Sq. Ft.	\$156.79	\$166.96
Building Construction Cost per Student	\$18,216.85	\$24,890.79
Acres per Student	0.028	0.034
Cost per Acre	\$50,023.47	\$50,023.47
Land Cost per Student	\$1,386.17	\$1,722.56
Operations/Support Facilities per Student (Sq. Ft.)	1.56	1.56
Cost per Sq. Ft.	\$165.00	\$165.00
Operations/Support Facility Cost per Student	\$257.10	\$257.10
Buses/Vehicles per Student	0.007	0.007
Weighted Average Cost per Bus/Vehicle	\$80,218.63	\$80,218.63
Bus/Vehicle Cost per Student	\$580.06	\$580.06
Total Gross Cost Per Student	\$20,440.19	\$27,450.51
Principal Payment Credit per Student	(\$2,620.06)	(\$3,525.44)
Total Net Local Capital Cost per Student	\$17,820.13	\$23,925.07

Fee Schedules





WCS Fees: Option 1 (No Unit Size Variation)

INPUT VARIABLES: Williamson Co. Schools Impact Fees			
		School Level	
<i>Public School Students per Housing Unit</i>			
		<i>K-8</i>	<i>9-12</i>
Dwelling Unit Type		<i>Total</i>	
	Single Family	0.387	0.167
	Multifamily	0.232	0.068
Cost Factors			
Total Net Local Capital Cost per Student		\$17,820.13	\$23,925.07
MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools			
<i>Impact Fee per Housing Unit</i>		<i>K-8</i>	<i>9-12</i>
Dwelling Unit Type		TOTAL	
	Single Family	\$6,902	\$3,996
	Multifamily	\$4,126	\$1,619



WCS Fees: Option 2 (Fees by Size of House)

INPUT VARIABLES: Williamson Co. Schools Impact Fees			
<i>Public School Students per Housing Unit</i>	School Level		
	<i>K-8</i>	<i>9-12</i>	<i>Total</i>
Dwelling Unit Size			
1,799 square feet or less	0.128	0.066	0.194
1,800 - 2,199 square feet	0.236	0.109	0.345
2,200 - 2,599 square feet	0.322	0.141	0.463
2,600 - 2,999 square feet	0.394	0.168	0.562
3,000 - 3,399 square feet	0.455	0.190	0.645
3,400 square feet or more	0.509	0.209	0.718
Cost Factors			
Total Net Local Capital Cost per Student	\$17,820.13	\$23,925.07	
MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools			
<i>Impact Fee per Housing Unit</i>	<i>K-8</i>	<i>9-12</i>	<i>TOTAL</i>
Dwelling Unit Size			
1,799 square feet or less	\$2,281	\$1,579	\$3,860
1,800 - 2,199 square feet	\$4,206	\$2,608	\$6,813
2,200 - 2,599 square feet	\$5,738	\$3,373	\$9,112
2,600 - 2,999 square feet	\$7,021	\$4,019	\$11,041
3,000 - 3,399 square feet	\$8,108	\$4,546	\$12,654
3,400 square feet or more	\$9,070	\$5,000	\$14,071



FSSD for Grades 9-12: Option 1(No Unit Size Variation)

INPUT VARIABLES: Williamson Co. Schools Impact Fees

(within Franklin Special School District boundaries)

<i>Public School Students per Housing Unit</i>	<i>School Level</i>
	9-12
<i>Dwelling Unit Type</i>	
Single Family	0.167
Multifamily	0.068
<i>Cost Factors</i>	
Total Net Local Capital Cost per Student	\$23,925.07

MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools

(within Franklin Special School District boundaries)

<i>Impact Fee per Housing Unit</i>	<i>School Level</i>
	9-12
<i>Dwelling Unit Type</i>	
Single Family	\$3,996
Multifamily	\$1,619



FSSD for Grades 9-12: Option 2 (Fees by Size of House)

INPUT VARIABLES: Williamson Co. Schools Impact Fees (within Franklin Special School District boundaries)	
Public School Students per Housing Unit	School Level
	9-12
Dwelling Unit Size	
1,799 square feet or less	0.066
1,800 - 2,199 square feet	0.109
2,200 - 2,599 square feet	0.141
2,600 - 2,999 square feet	0.168
3,000 - 3,399 square feet	0.190
3,400 square feet or more	0.209
Cost Factors	
Total Net Local Capital Cost per Student	\$23,925.07
MAXIMUM ALLOWABLE SCHOOL IMPACT FEES: Williamson Co. Schools (within Franklin Special School District boundaries)	
Impact Fee per Housing Unit	School Level
	9-12
Dwelling Unit Size	
1,799 square feet or less	\$1,579
1,800 - 2,199 square feet	\$2,608
2,200 - 2,599 square feet	\$3,373
2,600 - 2,999 square feet	\$4,019
3,000 - 3,399 square feet	\$4,546
3,400 square feet or more	\$5,000